



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,521	03/29/2001	Ssu-Pin Ma	67,200-261	6080

7590 05/29/2003  
TUNG & ASSOCIATES  
Suite 120  
838 W. Long Lake Road  
Bloomfield Hills, MI 48302

EXAMINER

WARREN, MATTHEW E

ART UNIT	PAPER NUMBER
----------	--------------

2815

DATE MAILED: 05/29/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/821,521

Applicant(s)

MA ET AL.

Examiner

Matthew E. Warren

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9, 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office Action is in response to the Amendment filed on March 12, 2003.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 11-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al. (US 6,294,401 B1) in view of Shiga (US 5,396,101).

Jacobson et al shows (fig. 4) a microelectronic fabrication comprising a substrate (410), a spirally patterned conductor layer (426) formed over the substrate wherein the spiral patten terminates in a microelectronic structure (425) formed within the center of the spirally patterned conductor layer. The spirally patterned conductor layer forms a planar spiral inductor and the microelectronic structure comprises a series of electrically interconnected sub-patterns. The substrate is employed within a microelectronic fabrication of integrated circuit microelectronic fabrications. The microelectronic structure is selected from the group consisting of bond pads. The microelectronic structure is actually a capacitor connected with a bond pad. (col. 7, lines 3-30). The spiral pattern is in the shape of a rectangle and comprises more than one loop. The spiral patterned conductor layer is formed of a conductor material consisting of non-magnetic metal (col. 7, lines 3-8). Jacobson shows all of the elements of the claims

Art Unit: 2815

except the at least four electrically interconnected sub-patterns to attenuate eddy currents in the microelectronic structure. It would have been obvious to one of ordinary skill in the art to form three, four, etc., sub patterns since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Shiga shows (figs. 2 and 3) an inductance element that has a core (14) formed in the center of a substrate. The core comprises a plurality of circuit elements (14a), at least 4 of them. The elements attenuate eddy currents in the structure and ultimately the operating frequency is elevated (col. 4, lines 27-31). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the interconnected sub-patterns of Jacobson by adding more sub-patterns as taught by Shiga to attenuate eddy currents in a microelectronic device and ultimately increase the operating frequency.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al. (US 6,294,401 B1) in view of DiCaprio et al. (US 6,452,278 B1).

Jacobson et al shows (fig. 4) a microelectronic fabrication comprising a substrate (410), a spirally patterned conductor layer (426) formed over the substrate wherein the spiral patter terminates in a microelectronic structure (425) formed within the center of the spirally patterned conductor layer. The spirally patterned conductor layer forms a planar spiral inductor and the microelectronic structure comprises a series of electrically interconnected sub-patterns. Although Jacobson shows bond pads, the bond wire bonded to the microelectronic structure has not been illustrated. DiCaprio et al. shows

(fig. 1) shows a semiconductor device in which a die has low loop bond wires (24) connected to bond pads to help minimize the height of the package (col. 2, lines 48-50). Neither reference shows that the bond wire has a plurality of loops. It would have been obvious to one of ordinary skill in the art to form three, four, etc., sub loops in a bond wire since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bond pads of Jacobson by attaching a low loop bond wire as taught by DiCaprio to minimize the height of the package.

### ***Response to Arguments***

Applicant's arguments filed with respect claims 9-16 have been fully considered but they are not persuasive. The applicant primarily asserts that Shiga cannot be combined with Jacobson et al. because the inductor of Jacobson is unlikely to experience eddy currents. The examiner believes that the cited references show all of the elements of the claims and can be combined. Although the ID tag of Jacobson is not powered in a static state, at some point the inductor in the device is powered. At the time that the device is powered eddy currents may be experienced. Shiga was cited to show that 4 or more sub-patterns could be connected to achieve a function in an inductive device. Jacobson disclosed sub-patterns in the inductive device but did not specifically disclose the e- As stated in the rejection, such a number of connections.

Art Unit: 2815

*duplication of parts* and is therefore not distinguishable over the cited art. If the applicant questions the validity of the St. Regis Paper, then the applicant should use his/her resources to locate the ruling. Shiga, disclosing multiple sub-patterns, may ultimately be combined with Jacobson because both are analogous references concerned with inductors. Therefore the cited art shows all of the elements of the claims and this action is made final.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Warren whose telephone number is (703) 305-0760. The examiner can normally be reached on Mon-Thurs, and alternating Fri, 9:00-5:00.

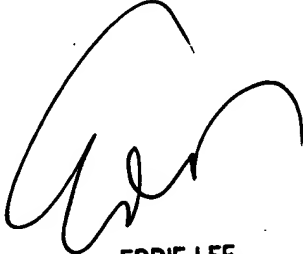
Art Unit: 2815

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MEW

May 25, 2003



**EDDIE LEE**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**